



de maximis, inc.

186 Center Street
Suite 290
Clinton, NJ 08809
(908) 735-9315
(908) 735-2132 FAX

April 13, 2016

Jennifer LaPoma
U.S. Environmental Protection Agency, Region II
290 Broadway
New York, New York 10007-1866

Via Electronic Mail

**Re: Response to USEPA Region 2's January 7, 2016 Letter
Revised 17-Mile Lower Passaic River Study Area (LPRSA) Baseline Human Health
Risk Assessment - Administrative Agreement and Order on Consent for Remedial
Investigation/Feasibility Study - CERCLA Docket No. 02-2007-2009**

Dear Ms. LaPoma:

The Lower Passaic River Cooperating Parties Group (CPG) is compelled to respond and address for the record a number of the statements made by USEPA Region 2 (Region 2 or Region) in its January 7, 2016 letter in response to the CPG's December 18, 2015 transmittal of the 17-mile Baseline Human Health Risk Assessment (BHHRA).

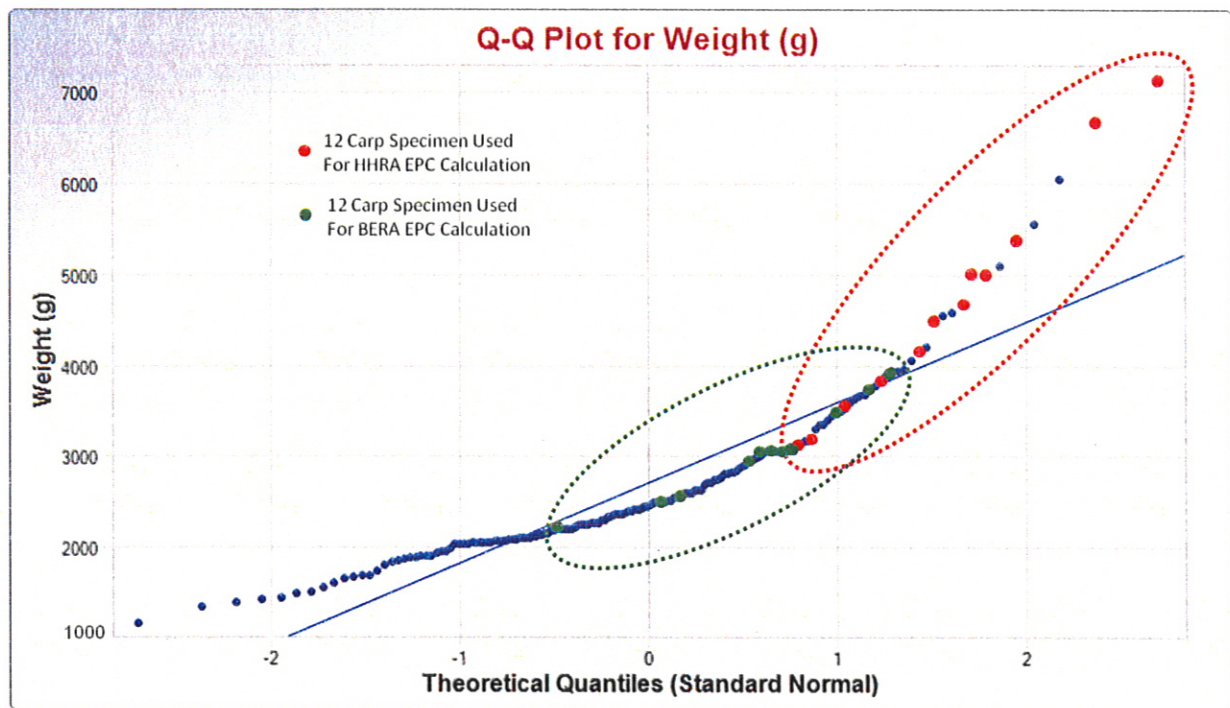
The CPG correctly maintains that the entirety of the Region 2's BHHRA directives have resulted in significantly overestimating (i.e., inflating) the potential human health risks for the 17-mile LPRSA. This includes the Region's narrow and overly conservative definition of the RME, bias in exposure point concentrations, and overestimation of PCB risks and hazards. Thus, as the Region required the CPG has revised the 17-mile BHHRA under protest and stands behind its positions taken in opposition to these directives in the CPG's transmittal letter and previous correspondence related to its disagreements on the Region's BHHRA directives.

"Consciously-Biased Selection of the Largest Fish Specimens"

There was a general bias in the Region's identification of specimens for chemical analysis toward larger fish. This is best exemplified by the carp data set, but the bias is also present in other species data sets with large sample sizes. At the January 20, 2010 CPG-EPA meeting to discuss the sample analysis plan for the 2009 fish sampling, Region 2 stated that large individuals be selected whenever possible. Of the 180 carp specimens caught during the CPG's 2009 sampling program, the 12 specimens

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identified by the Region for chemical analysis for the BHHRA include many of the largest specimens, as shown below.



As the CPG has previously stated, this approach resulted in an unrealistic data set for the BHHRA. The past two creel/angler surveys on the river, as well as the CPG's fish exchange data, support that LPRSA anglers keep what they catch, not just the largest ones as the Region has maintained. Because of the Region's conscious bias toward analysis of larger fish, the tissue chemistry database is biased upward and overestimates exposure concentrations for anglers that may consume their catch. Moreover, the Region's specimen selection has introduced biased and implausible scenarios into the 17-mile Baseline Ecological Risk Assessment (BERA) whereby some bird species (e.g., great blue heron) are exposed to higher chemical concentrations because only large specimens (carp > 2,000 grams) were analyzed and not specimens close to or within the size-range (<450 grams) that the birds are physically able to consume.

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"Misrepresents PCB Risks"

The Region cites an example approach for supplementing PCB risk assessment when congener data are available (which is not identified as the required approach) from USEPA's 1996 PCB risk assessment guidance that is now 20 years old. As Region 2 acknowledges in their June 5, 2015 comments on the draft BHHRA, this approach overestimates the contribution from PCBs, due to double-counting of the risk posed by the dioxin-like fraction. Further, more recent USEPA guidance on the application of TEFs (USEPA 2010) or guidance on risk assessment of sites with PCBs and dioxins (USEPA 2013) does not recommend summing dioxin-like and non-dioxin-like PCBs risks and hazards as directed by Region 2 for the LPRSA BHHRA. Region 2 has ignored this information in favor of an approach that results in over-estimating the risk contribution of PCBs.

"Compounding Conservatism"

The Region's combination of exposure assumptions directed for the RME individual do not reflect an *"appropriately health protective, but not unrealistic combination of average and high end"* assumptions, as the Region states in its January 7, 2016 letter. This is especially evident in the directed assumptions for the RME evaluation of fish and crab consumption:

- 90th percentile fish and crab consumption rate (high end),
- Assume that fat and cooking juices are always consumed (high end),
- All of the fish/crab consumed comes from the LPRSA (high end),
- 90th percentile exposure duration (high end),
- Mean body weight (average),
- 95th percentile cancer slope factors (high end).

This combination does not reflect a mix of average and high end assumptions, as recommended in EPA's RAGS guidance. Combined with fish tissue exposure point concentrations that are biased high, the combination of the Region's unrealistic assumptions has resulted in risk estimates that are not only well above risks experienced by the majority of people, but lie at the extreme tail of the distribution. The CPG does not support risk management decision-making that relies on such distorted and implausible characterizations of RME risk as directed by Region 2.

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"Refusal to Acknowledge the Severe and Significant Pathogen Risk"

Region 2 has directed the CPG to strike references to the presence of pathogens in LPRSA risk planning documents, as well as the BHHRA. The most recent examples include Region 2's June 5, 2015 comments on the draft BHHRA (#30, #114, #157). The Region has directed that analysis of pathogen risks not be included in the BHHRA because it has determined that pathogens do not fall under CERCLA. Region 2 continues to ignore the multiple stressors impacting both human and ecological health of the river.

"Underestimation of the Contribution of Background Conditions on Site Risk"

The Region's background risk characterization for the lower 8 mile FFS risk assessments underestimated the contribution of background to Site risk. The FFS analysis of background fish consumption risk was limited to three chemicals included in the Region's sediment-tissue regression model (TCDD-TEQ, PCBs, and methyl mercury). If the Region had used the available empirical background tissue data set they required the CPG to collect in the approved background area, a more complete understanding of background would be evident. The Region's short-list modeling approach underestimates background conditions that pose significant risk and does not provide accurate context for interpreting risks posed by the Site itself. Further, the Region's evaluation of background fish consumption risk included only white perch and American eel, but not common carp. This approach was taken despite the Region's inclusion of carp in its assessment of risk for the lower 8 miles, and its directive to the CPG to include carp in the 17-mile BHHRA. The Region's inconsistent selection of fish species to include in assessing Site and background risks results in a biased outcome that underestimates background risk.

Site-Specific Human Health Risk Assessment

The CPG is mystified and disappointed at the Region's response regarding the SSHRA. It is not unusual or inconsistent with EPA practices and policies to consider alternatives analyses especially when they are not inconsistent with guidance or statutes. The Region's unwillingness to consider alternative scenarios based on more recent and site-specific data has been, and remains, troubling.

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17-mile LPRSA RI/FS Completion

The CPG disagrees with the Region's assertion that the CPG determines the schedule for the completion of the 17-mile BHHRA or any document(s) associated with the 17-mile RI/FS. Rather it is clear that Region 2 and its Partner Agencies (PAs) drive the schedule for completing the 17-mile RI/FS.

The CPG delivered the draft 17-mile BHHRA on June 6, 2014 and the Region provided comments on June 5, 2015. The CPG delivered its response to comments on August 21, 2015 with the understanding that the Region would provide its responses in 30 days. The Region provided its responses on October 16, 2015. In fact, the Region was still providing information it required for the revised BHHRA as late as 2 weeks before the agreed upon delivery date of December 18, 2015. The Region's June 5, 2015 email indicated that the revised BHHRA would "*require a complete and thorough review by EPA and the partner agencies*". Thus, it is not unreasonable to conclude (based on the nearly year-long review periods for the draft 2014 BHHRA and BERA by the Region and its PAs) that it will take several months, if not longer, for the review process envisioned by the Region. Again, the CPG reiterates that this is a time-consuming and unneeded process; since a review by the Region and its contractors is more than sufficient.

Finally, the CPG reminds the Region that it delivered the remaining 17-mile LPRSA RI/FS draft documents in early 2015:

- Remedial Investigation (RI) Report – February 18, 2015
- Feasibility Study – April 30, 2015

In addition, the CPG provided LPRSA modeling deliverables during the second quarter of 2015 and a number of revised data summary reports in November 2015. It is the understanding of CPG that the Region intends to provide comments on the RI Report this month, however no recent information on when approvals or comments on any of the remaining documents has been provided to the CPG.

The CPG requests that this letter be included in both the Administrative Records for the 17-mile LPRSA operable unit of the Diamond Alkali Superfund Site and the 8-mile Proposed Plan.

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If you have any questions, please contact me.

Very Truly Yours,
de maximis, inc.



Robert Law, Ph.D.
CPG Project Coordinator

cc:

Stephanie Vaughn, USEPA Region 2
Ray Basso, USEPA Region 2
Walter Mugdan, USEPA Region 2
Sarah Flanagan, USEPA Region 2
James Woolford, USEPA Headquarters
Steve Ells, USEPA Headquarters
CPG Members
William Hyatt, CPG Coordinating Counsel
Willard Potter, de maximis, inc.